



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/748,197

12/31/2003

Chang-Seob Kim

1568.1079

6732

49455 7590 05/28/2010

STEIN MCEWEN, LLP
1400 EYE STREET, NW
SUITE 300
WASHINGTON, DC 20005

EXAMINER

LAIOS, MARIA J

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

05/28/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptomail@smiplaw.com

Office Action Summary	Application No. 10/748,197	Applicant(s) KIM ET AL.	
	Examiner MARIA J. LAIOS	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,8,12,14,20-22 and 24-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20100303 and 20100330</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment filed 24 February 2010. Claims 1, 3, 8, 14 and 20 have been amended. Claims 1-3, 5-6, 8, 12, 14, 20-22, 24-28 are currently pending.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The claim rejections under 35 USC 112, second paragraph for claims 1, 8, 14, and 20 are withdrawn because applicant has amended the claims.

Claim Rejections - 35 USC § 103

4. The claim rejections under 35 USC 103(a) as being unpatentable over Narukawa et al. (US 5,834,133) for claims 1-3, 8, 14, 20 and 24-26 are withdrawn because the claims have been amended. The claim rejections under 35 USC 103(a) as being unpatentable over Narukawa et al. (US 5,834,133) and Narukawa et al. (US 5,808,122) for claims 5-6, 12, 21, 22, 27 and 28 are withdrawn.
5. Claim 1-3, 5-6, 8, 12, 20-22 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akoin et al. (JP 2003-031201 A).

As to claims 1 and 20, Akoin et al. discloses a jelly roll type battery unit (12) comprising a pair of electrode plates (11); terminals (13 or 14 -tabs); an active material coated on a portion

Art Unit: 1795

of the plate (Paragraph 10; coated portion -17 and non coated portion-18) and a separator interposed between the pair of electrodes (Figure 1). The tab is formed by folding a cut portion (19) of an uncoated area (18) toward an upper edge wherein the cut portion (19) is defined by a portion of a lower edge of the current collector (plate), a portion of a side edge of the current collector that extends from the lower edge, a cut that begins at the lower edge and extends along more than half of a width of the current collector and a fold extending between the side edge and the cut and the tab extends past the upper edge of the current collector (Figures 3a and 3b).

Akoin et al. discloses the tab located at the innermost layer of the battery unit (Paragraph 22).

Akoin et al. is silent on the tab partially overlapping and facing the second electrode tab.

However it would have been obvious to plate the electrode tabs of the battery unit in a location where, upon wind up of the jelly roll, the tabs partially overlap each other because it has been held that rearranging part of an invention involves only routine skill in the art (In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)). See MPEP 2144.04 (VI). Furthermore it is noted that a tri functional electrode as defined by the applicant is the current collector, the tab and the active material on the current collector.

As to claim 2, the tab is formed at the winding start portion of the current collector since it is preferred to have the tab at the center (Paragraph 22).

As to claim 3, Akoin et al. shows the tabs can be located at the center (Figure 7) or at the outer portion of the wound (Figure 1). Although Akoin et al. is silent on disposing one tab in the center and the other tab at the outer portion it would have been obvious because it has been held that rearranging part of an invention involves only routine skill in the art (In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)). See MPEP 2144.04 (VI).

Art Unit: 1795

As to claim 8, Akoin et al. discloses a method of winding a jelly roll type battery unit (12) comprising forming a first electrode plate (11) having a tab formed by folding a cut portion (19) of an uncoated area (18) toward an upper edge wherein the cut portion (19) is defined by a portion of a lower edge of the current collector (plate), a portion of a side edge of the current collector that extends from the lower edge, a cut that begins at the lower edge and extends along more than half of a width of the current collector and a fold extending between the side edge and the cut and the tab extends past the upper edge of the current collector (Figures 3a and 3b).

Akoin et al. discloses the tab located at the innermost layer of the battery unit (Paragraph 22). A second electrode plate having a second current collector with a second electrode tab (11, 13 or 14). The electrode plates (11) and a separator interposed between the pair of electrodes (Figure 1) and wound (Figure 1).

As to claims 5, 6, 12, 21 and 22, Akoin et al. discloses an insulating tape is adhered to the tab and the tape is located on both sides of the plate (11) (Paragraph 14).

By including all of the structural elements of claims 1 and 2, the apparatus is capable of performing the functions recited in claims 24-26. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429,1431-32 (Fed. Cir. 1997) “[A]pparatus claims cover what a device is, not what a device does.” Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural

Art Unit: 1795

limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (*MPEP 2114*).

6. Claims 14, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akoin et al. (JP 2003-031201 A) in view of Narukawa et al. (US 5,834,133).

Akoin et al. discloses a jelly roll type battery unit (12) comprising a pair of electrode plates (11); terminals (13 or 14 -tabs); an active material coated on a portion of the plate (Paragraph 10; coated portion -17 and non coated portion-18) and a separator interposed between the pair of electrodes (Figure 1). The tab is formed by folding a cut portion (19) of an uncoated area (18) toward an upper edge wherein the cut portion (19) is defined by a portion of a lower edge of the current collector (plate), a portion of a side edge of the current collector that extends from the lower edge, a cut that begins at the lower edge and extends along more than half of a width of the current collector and a fold extending between the side edge and the cut and the tab extends past the upper edge of the current collector (Figures 3a and 3b). Akoin et al. discloses the tab located at the innermost layer of the battery unit (Paragraph 22). Akoin et al. is silent on the tab partially overlapping and facing the second electrode tab. However it would have been obvious to plate the electrode tabs of the battery unit in a location where, upon wind up of the jelly roll, the tabs partially overlap each other because it has been held that rearranging part of an invention involves only routine skill in the art (*In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)). See *MPEP 2144.04 (VI)*. Furthermore it is noted that a tri functional electrode as defined by the applicant is the current collector, the tab and the active material on the current collector.

Art Unit: 1795

Furthermore Akoin et al. discloses the battery in a conventional metallic resin flat case (figure 7; paragraphs 2 and 3) but does not disclose the case as having a cap assembly connected to the upper portion of the case having a cap plate and an electrode terminal connected to the cap plate through a terminal through-hole formed in the cap plate and having a gasket at an outer surface for insulation from the cap plate.

Narukawa et al. disclose a lithium battery-(col. 6 lines 27) (Figure 1); a can (casing-1); a cap assembly connected to an upper portion of the can (Figure 1) and having a cap plate and an electrode terminal (7) connected to the cap plate (6) through a terminal through hole (figure 1) formed in the cap plate and having a gasket (8, 9) at an outer surface for insulation from the cap plate and jelly roll type battery unit.

It would have been obvious to one of ordinary skill in the art at the time of the invention to form the electrode unit of Akoin et al. with a case of Narukawa et al. because these are common forms of battery cases/shapes and it is within the ordinary skill to form them.

As to claims 27 and 28, Akoin et al. discloses an insulating tape is adhered to the tab and the tape is located on both sides of the plate (11) (Paragraph 14). Furthermore by including all of the structural elements of claim, the apparatus is capable of performing the functions recited in claims 27-28. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429,1431-32 (Fed. Cir. 1997) “[A]pparatus claims cover what a device is, not what a device does.” Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). A claim containing a “recitation with respect to the manner in which a claimed apparatus is

Art Unit: 1795

intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (*MPEP 2114*).

Response to Arguments

7. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection as necessitated by amendment.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1795

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARIA J. LAIOS whose telephone number is (571)272-9808.

The examiner can normally be reached on 11am-7pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. J. L./

Examiner, Art Unit 1795

/Dah-Wei D. Yuan/

Supervisory Patent Examiner, Art Unit 1795